

Fig. 2. Outline of a scale of *Platysomus rotundus*, considerably enlarged.

Fig. 3. Outline of a scale of *Platysomus Forsteri*, enlarged.

Fig. 4. Outline of a mandibular ramus of *Celacanthus lepturus*, slightly enlarged: *a*, articular piece; *b*, glenoid surface; *c*, dentary bone; *d*, teeth. The articular piece and dentary bone are laid together in their natural positions, but not united; so that the form and extent of each can be distinctly traced.

PLATE XVIII.

Fig. 1. Scale, natural size, of *Ctenodus* (first species): *a*, anterior margin; *b*, posterior or exposed ditto; *c*, marginal border; *d*, rupture exposing cast of upper surface; *e*, central area.

Fig. 2. Scale, natural size, of *Ctenodus* (second species): *a*, anterior margin; *b*, posterior extremity; *c*, marginal border; *d*, central area: the dotted line indicates the form and extent of the scale.

XXVII.—*The Mollusca of St. Helena.*

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WITH the assistance of my friend Mr. M^r Andrew, I have examined a collection of shells made by Mr. J. C. Melliss at St. Helena; and I subjoin a list of them. Most of the marine shells were picked up on the beach, and are consequently in bad condition. The only specimen procured from deepish water (about fifty fathoms) is *Ostrea crista-galli*; and this is covered with two kinds of stony coral, which Prof. Duncan refers to *Sclerohelia hirtella* and a species of *Balanophyllia*. The land-shells of St. Helena have been already noticed by the late Mr. G. B. Sowerby in the Appendix to Mr. Darwin's work on Volcanic Islands, as well as by Mr. Blofeld and the late Prof. E. Forbes in the Quarterly Journal of the Geological Society of London for August 1852. In the opinion of the last-named author, "a closer geographical relationship between the African and American continents than now maintains is dimly indicated" by the marine mollusks of St. Helena; and "the information we have obtained respecting the extinct and existing terrestrial mollusks of this isolated fragment of land would seem to point in the same direction, and assuredly to indicate a closer geographical alliance between St. Helena and the west [?east] coasts of South America than now holds." And in the Report of the British Association for 1851 will be found an abstract of a paper by the same distinguished naturalist, entitled, "On some Indications of the Molluscan Fauna of the Azores and St. Helena." It is here stated that "the marine mollusks [of St. Helena] would seem to point to the submergence of a tract of land probably linking Africa and

South America before the elevation of St. Helena. Along the sea-coast of such a tract of land the creatures common to the West Indies and Senegal might have been diffused." I am not quite satisfied with this hypothesis, and I believe that more information is needed to support it. Some of the land-shells of St. Helena are European, and may have been introduced by the agency of man; others are peculiar to the island. A few of the marine shells are Mediterranean, while the greater number are well-known inhabitants of the Indian Ocean and the West Indies: all these may have originated anywhere. But it must be borne in mind that St. Helena is separated from Africa and South America in every direction by very deep water, which is nowhere less than 2000 fathoms or 12000 feet. It therefore seems scarcely probable that such an abyssal and extensive tract of the sea-bed could have been dry land or "sea-coast," in a geologically recent period, so as thus to account for the diffusion of littoral species such as *Mytilus edulis*, *M. crenatus*, and *Littorina striata*. I should be rather inclined to attribute the present distribution of the marine fauna of St. Helena (not to a supposed continuity of land between Africa and South America in that or any other direction, but) to the action and influence of the great Agulhas Current, which issues from the Indian Ocean and flows round the Cape of Good Hope northwards towards St. Helena, and thence past Ascension to the West Indies. The partial correspondence between the Mollusca of the Indian Ocean and of the Mediterranean may have been owing to the Guinea Current, as well as to a passage which formerly existed across Africa in the line of the Sahara—a very wide tract, which certainly was submerged during the quaternary period. I must admit, however, that our information as to the marine Mollusca of the South-Atlantic region, including St. Helena, is very scanty and unsatisfactory. The only dredging that has ever, to my knowledge, been attempted off St. Helena was made by Dr. Wallich in 1857, on his return home from India; and this was at a depth of from 20 to 30 fathoms. It produced a few small shells, which Dr. Wallich kindly gave me. Many of these appear to be undescribed species. The promised circumnavigation expedition, under the auspices of the Royal Society, will doubtless enable us to learn something of the South-Atlantic fauna.

Mr. Edgar Smith will describe such of the species in the subjoined list and of those dredged by Dr. Wallich as are new to science. Mr. Melliss has presented to the British Museum all the specimens, with the exception of a few duplicates,

which are in the excellent and accessible collection of Mr. M'Andrew.

Class *CONCHIFERA*.

Order LAMELLIBRANCHIATA.

Family OSTREIDÆ.

Ostrea crista-galli, *Linné*.

Family AVICULIDÆ.

Pinna pernula, *Chemnitz*.

Avicula hirundo, *L*.

Family MYTILIDÆ.

Mytilus edulis, *L*.

— *crenatus*, *Lamarck*.

Lithodomus lithophagus, *L*.

Family ARCIDÆ.

Arca domingensis, *Lam*.

Family LUCINIDÆ.

Lucina, *n. sp.*

Family CHAMIDÆ.

Chama gryphoides, *L*.

Class *GASTROPODA*.

Order PECTINIBRANCHIATA.

Family PATELLIDÆ.

Patella plumbea, *Lam*.

Tectura virginea, *Müller*.

Hipponyx mitrula, *Lam*.

— *radiatus*, *Quoy & Gaimard*.

Family FISSURELLIDÆ.

Fissurella arcuata, *G. B. Sowerby*.

Family LITTORINIDÆ.

Littorina striata, *King*.

Family SCALARIIDÆ.

Scalaria modesta, *C. B. Adams*.

Family PYRAMIDELLIDÆ.

Odostomia circinata, *H. Adams*.

Family IANTHINIDÆ.

Ianthina fragilis, *Bruguère*.

Family EULIMIDÆ.

Eulima, *n. sp.*

Family NATICIDÆ.

Natica nitida, *Donovan*.

Order SIPHONOBANCHIATA.

Family BUCCINIDÆ.

Purpura Rudolphi, *Lam*.

Family MURICIDÆ.

Triton variegatus, *Lam*.

— *olearium*, *L*.

Ranella cæolata, *Broderip*.

Murex, *n. sp.*

Family NASSIDÆ.

Cassidea testiculus, *L*.

Nassa incrassata, *Ström*, var.

Columbella cribraria, *Lam*.

(*H. & A. Adams*).

Cominella lugubris, *C. B. Adams*.

Family CYPRÆIDÆ.

Marginella, *n. sp.*

Cypræa lurida, *L*.

— *spurca*, *Lam*.

— *turdus*, *L*.

— *moneta*, *L*.

Family CONIDÆ.

Conus testudinarius, *Martini*.

— *irregularis*, *G. B. Sow*.

Order PULMONOBANCHIATA.

Family LIMACIDÆ.

Limax gagates, *Draparnaud*.

— *n. sp.*

— *n. sp.*

Family HELICIDÆ.

Succinea picta, *Pfeiffer*.

— *solidula*, *Pf*.

— *Helenæ*, *Forbes*.

— *Bensoniana*, *Forb*.

Zonites cellarius, *Müll*.

— *alliarius*, *Miller*.

Helix aspersa, *Müll*.

— *polyodon*, *G. B. Sow.*, = *H.*

Alexandri, *Forb*.

Bulimus auris-vulpina, *Chemn.*
(semifossil).

— *fossilis*, *G. B. Sow.* (semi-fossil).

Pupa umbilicata, *Drap*.

Achatina subplicata, *G. B. Sow.*
(semifossil).